

**STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISSION**

**IN RE: THE NARRAGANSETT ELECTRIC COMPANY :
d/b/a NATIONAL GRID’S ELECTRIC :
INFRASTRUCTURE, SAFETY, AND RELIABILITY : DOCKET NO. 4915
PLAN FY 2020 PROPOSAL :**

REPORT AND ORDER

I. National Grid’s Filing

On December 21, 2018, The Narragansett Electric Company d/b/a National Grid (National Grid or Company) filed with the Public Utilities Commission (PUC or Commission) its proposed Electric Infrastructure, Safety, and Reliability Plan (Electric ISR Plan) for FY 2020.¹ National Grid indicated that the Division of Public Utilities and Carriers (Division) had reviewed the proposed Electric ISR Plan and the Electric ISR Plan reflected a consensus between National Grid and the Division.² On March 1, 2019, National Grid filed

¹ R.I. Gen. Laws § 39-1-27.7.1 states, in relevant part, that National Grid shall file proposals with the Public Utilities Commission that contain:

An annual infrastructure, safety and reliability spending plan for each fiscal year and an annual rate reconciliation mechanism that includes a reconcilable allowance for the anticipated capital investments and other spending pursuant to the annual pre-approved budget as developed in accordance with [the following:] Prior to the beginning of each fiscal year, gas and electric distribution companies shall consult with the division of public utilities and carriers regarding its infrastructure, safety, and reliability spending plan for the following fiscal year, addressing the following categories: (1) Capital spending on utility infrastructure; (2) For electric distribution companies, operation and maintenance expenses on vegetation management; (3) For electric distribution companies, operation and maintenance expenses on system inspection, including expenses from expected resulting repairs; and (4) Any other costs relating to maintaining safety and reliability that are mutually agreed upon by the division and the company. The distribution company shall submit a plan to the division and the division shall cooperate in good faith to reach an agreement on a proposed plan for these categories of costs for the prospective fiscal year within sixty (60) days. To the extent that the company and the division mutually agree on a plan, such plan shall be filed with the commission for review and approval within ninety (90) days. If the company and the division cannot agree on a plan, the company shall file a proposed plan with the commission and the commission shall review and, if the investments and spending are found to be reasonably needed to maintain safe and reliable distribution service over the short and long-term, approve the plan within ninety (90) days.

The FY 2019 Electric ISR Plan and all of the documents referenced herein can be found on the PUC’s website at: <http://www.ripuc.ri.gov/eventsactions/docket/4915page.html>

² Filing Letter at 1 (Dec. 21, 2018).

an updated revenue requirement to reflect the effect of its federal tax returns, filed in December 2018, as well as estimates and corrections to net operating losses on FY 2019 and FY 2020 assets.³

On March 19, 2019, after conducting discovery and a hearing, the PUC approved the Electric ISR Plan with the revised revenue requirement. The approved revenue requirement was \$17,937,335, resulting in an incremental fiscal year upward rate adjustment of \$6,795,506. This will support a FY 2020 Electric ISR Plan capital budget of \$101,800,000, a vegetation management budget of \$10,400,000, an infrastructure and maintenance (I&M) budget of \$771,000, and other operations and maintenance (O&M) expense of \$336,000.⁴

A. Electric ISR Plan

In support of the Electric ISR Plan, National Grid submitted the direct testimony of National Grid Service Company employees Patricia C. Easterly, Director, New England Electric Performance and Planning; Ryan A. Moe, Senior Specialist in Vegetation Strategy; and Kathy Castro, Engineering Manager in the Distribution Planning and Asset Management Department (collectively, the plan witnesses). In support of the development of the revenue requirement and to explain the reconciliation process, National Grid Service Company submitted the direct testimony of its employee Melissa A. Little, Director of New England Revenue Requirements. In support of the new tariffs and to explain the calculation of the factors and provide customer bill impacts, National Grid Service Company submitted the direct testimony of its employee Adam S. Crary, Senior Analyst for Electric Pricing.

³ Revised Revenue Requirement; [http://www.ripuc.ri.gov/eventsactions/docket/4915-NGrid-RevRevenueRequirement\(3-1-19\).pdf](http://www.ripuc.ri.gov/eventsactions/docket/4915-NGrid-RevRevenueRequirement(3-1-19).pdf)

⁴ *Id.*

The plan witnesses indicated that the proposed Electric ISR Plan covered four budget categories for the fiscal year ending March 31, 2020: capital spending on infrastructure projects; O&M for vegetation management; I&M; and Volt/Var Optimization and Conservation Voltage Reduction Expansion (VVO/CVR).⁵ They explained that the Electric ISR Plan included a spending plan and proposed an annual reconciliation mechanism to “provide for recovery related to capital investments and other spending undertaken pursuant to the annual pre-approved budget for the Electric ISR Plan.”⁶

The proposed capital spending plan for FY 2020 was \$101.8 million.⁷ According to the plan witnesses, the Electric ISR Plan addressed the capital investment needed for five specific purposes: to meet state and federal regulatory requirements applicable to the electric system (Customer Request/Public Requirement); to repair failed or damaged equipment (Damage Failure); to address load growth/migration; to maintain reliable service (System Capacity and Performance); and to sustain asset viability through targeted investments driven primarily by condition (Asset Condition).⁸ Of these, the Company considers Customer Request/Public Requirements and Damage Failure to be non-discretionary “in terms of scope and timing” and “subject to necessary and unavoidable deviations.”⁹ These items, totaling \$40,530,000, account for 39.8% of the proposed capital outlays in FY 2020.¹⁰

The remaining categories, System Capacity and Performance, Asset Condition, and Non-Infrastructure, are meant to reduce the degradation of the service life of equipment, allow for more flexibility in the system for purposes of meeting various contingencies such as load

⁵ Easterly et al. Test. at 7.

⁶ *Id.*

⁷ *Id.* at 8.

⁸ *Id.* at 8-9.

⁹ *Id.* at 13.

¹⁰ *Id.* at 12.

growth and migration, and address poor condition of aged assets.¹¹ These items together comprised the other 60.2% of the FY 2020 budget.¹² A single large project, the Southeast Substation asset condition project, had a budget of \$6,250,000, or 6.1% of the total FY 2020 Electric ISR budget. Because of its size, consistent with the treatment of the South Street Substation project in prior ISR plans, the multi-year Southeast Substation project budget will be managed separately from the overall discretionary budget.¹³

The Electric ISR Plan also included the proposed FY 2020 spending levels for the Company's Vegetation Management Program of approximately \$10.4 million due to an increase in hazardous tree removal. The I&M spending included capital amounts already accounted for above plus \$771,000 for O&M costs related to the I&M program, including inspections, voltage testing, and the contact voltage program. Finally, there were "other" O&M expenses in the amount of \$336,000, related to the ongoing long-range system capacity load study and expansion of the VVO/CVR program.¹⁴

The Company agreed to provide the PUC with quarterly reports on the progress of executing the ISR Plan as well as an annual report at the time the Company files its annual reconciliation. Additionally, the Company and the Division agreed that, if circumstances required, National Grid would be allowed reasonable deviations from the plan, with explanations of any significant deviations to be included in its quarterly and year-end reports.¹⁵ For the first time, National Grid provided the PUC with a benefit cost analysis

¹¹ *Id.* at 7, 9.

¹² *Id.* at 8.

¹³ *Id.* at 14.

¹⁴ *Id.* at 19.

¹⁵ *Id.* at 17.

based on the PUC's Docket No. 4600 Guidance Document and Framework to support new budget proposals.¹⁶

B. Development of the ISR Factor

Mr. Crary explained that the overall ISR Factor embedded in distribution rates contains two mechanisms: (1) an Infrastructure Investment Mechanism to recover costs associated with incremental capital investment and (2) an O&M Mechanism to recover O&M expenses related to inspection and maintenance and vegetation management activities. To design the Infrastructure Investment Mechanism and develop the incremental capital investment, following Commission review of a cumulative revenue requirement, National Grid applies a rate base allocator that was developed in the most recently approved cost-of-service study. These become the Capital Expenditure Factors included in each rate class's respective overall ISR Factor. Similarly, the O&M mechanism is designed to allocate the inspection and maintenance and vegetation management expenses to rate classes based on the percentage of total distribution O&M expense allocated to each rate class in the most recent cost-of-service study. Within each rate class, National Grid calculates a per unit charge based on kilowatt hour (kWh) usage for non-demand classes and on a kilowatt (kW) basis for demand classes.¹⁷

Each year, by August 1, the Company proposes Capital Expenditure reconciling factors and an O&M reconciling factor to become effective on October 1 for the following twelve-month period. The reconciliation compares the actual cumulative revenue

¹⁶ *Id.* at 9-12, 20-26.

¹⁷ Crary Test. at 192-97; Section 6: Rate Design, Revised; [http://www.ripuc.ri.gov/eventsactions/docket/4915-NGrid-Revised%20Bill%20Impacts%20\(PUC%203-8-19\).pdf](http://www.ripuc.ri.gov/eventsactions/docket/4915-NGrid-Revised%20Bill%20Impacts%20(PUC%203-8-19).pdf). For G-02 and G-32/B-32 customers, whose charges include both demand and usage, the Capital Expenditure Factors and O&M Factors are designed "to not significantly change the relationship between the existing charges and will ensure that customers within the class that have differing usage characteristics will not experience significantly different bill impacts." Crary Test. at 197.

requirement to actual billed revenue generated from the Capital Expenditure Factors included in the prior year's overall ISR Factor. Any over- or under-recovery is refunded to or collected from customers through the Capital Expenditure Reconciling Factors. The O&M reconciling factor will compare the actual I&M and vegetation management O&M expense to actual billed revenue generated from the O&M factors. Any over- or under-collection of actual expense is refunded to or collected from customers through a uniform per kWh charge applicable to all rate classes.¹⁸

II. Division's Filing

On February 20, 2019, the Division submitted the testimony and report of its consultant Gregory L. Booth, P.E. on the Electric ISR Plan and a memorandum from its consultant David J. Effron on the revenue requirement. The Division generally supported the FY 2020 Electric ISR Plan and budget. Mr. Booth, however, as in years past, had several recommendations, including several related to the long-range planning process. In addition, this year, he provided additional recommendations to address potential overlap between non-discretionary spend in the Damage/Failure category and discretionary spend in the I&M category.¹⁹ Mr. Effron concluded that the revenue requirement had been reasonably calculated.²⁰

Mr. Booth emphasized the need for National Grid to complete all of its area studies in order to complete a single Long-Range Plan that would support major system capacity and asset condition projects. According to Mr. Booth, these studies should include evaluation metrics and non-wires alternatives where applicable.²¹ He identified the continued need to

¹⁸ *Id.* at 194-95, 197.

¹⁹ Booth Test. and Report at 8-9; http://www.ripuc.ri.gov/eventsactions/docket/4915-DIV-Booth_2-20-19.pdf.

²⁰ Effron Mem. at 1; http://www.ripuc.ri.gov/eventsactions/docket/4915-DIV-Effron_2-20-19.pdf.

²¹ Booth Report Summary at 8.

align ISR Plan core programs with those arising from initiatives external to National Grid in order to develop a more comprehensive, transparent, and forward-looking planning process.²² Addressing the categorization of work as either discretionary or non-discretionary, Mr. Booth explained that many of the activities included in Company work orders under the nondiscretionary Damage/Failure category were due to failed equipment. However, there were also some instances where projects involved equipment replacement where imminent failure was not evident. These projects could be seen as more properly falling under the discretionary asset condition and I&M categories. While Mr. Booth supported the Company's decisions to manage the system efficiently by bundling work, he maintained that the reasons for categorizing the work as discretionary versus non-discretionary work should be more clear. Although he did not recommend reconsidering thousands of work orders as non-discretionary or discretionary, he suggested that the Division and Company explore the possibility of keeping part of the budget in the non-discretionary category for failed equipment "and collapsing the remaining damage/failure and I&M budget under the discretionary category."²³

In sum, Mr. Booth made several specific recommendations for the Commission to consider.²⁴ The recommendations built on prior years' recommendations and focused on areas of distribution system planning, appropriate cost allocations, additional transparency in the planning and budgeting process, and various cost benefit analyses.

III. Hearing

On March 5, 2019, the PUC conducted an evidentiary hearing on the proposed Electric ISR Plan, as revised, at its offices at 89 Jefferson Boulevard, Warwick, Rhode Island.

²² *Id.* at 9.

²³ Booth Report at 14-16.

²⁴ *Booth Report* at 56-59.

National Grid presented Ms. Easterly, Ms. Castro, Ms. Little, and Mr. Crary in support of the Electric ISR Plan. The Company substituted Bertram Stewart, Manager of Vegetation Strategy, for Mr. Moe, who was unavailable for the hearing. The Company also called Ryan Constable, Grid Modernization Solutions Engineer, to provide testimony on the coordination of grid modernization, system reliability procurement, and the ISR. The Division called Mr. Booth to testify on its behalf.

Ms. Easterly, Ms. Castro, and Mr. Stewart testified that National Grid generally accepted Mr. Booth's recommendations, noting that several of the recommendations had been made in prior years and the Company was implementing those. They testified further that the Company would work collaboratively with the Division on the issues raised.²⁵ Addressing the new recommendation on discretionary and non-discretionary spending, Ms. Easterly explained that for the FY 2021 Plan year, the Company would make a proposal to the Division for its review.

To develop the 2021 proposal, the Company will review work that is deemed the result of a failure or asset replacement that could lead to an imminent failure of the system to determine whether those types of costs can be segregated from the asset condition work that is not the result of imminent failure. If so, then those costs would be included in the discretionary portion of the portfolio.²⁶ Ms. Easterly explained that this is more than a budgeting activity; it will impact the Company's work processes. This is, in part, due to the manner in which the non-discretionary and discretionary budgets are set and subsequently

²⁵ Hr'g. Tr. at 17-18, 23-24, 46, 55-56 (Mar. 5, 2019).

²⁶ *Id.* at 42-43.

reconciled. Unlike non-discretionary work, which is reconciled based on actual spending, the discretionary budget is only recoverable up to the budget level based on a three-prong test.²⁷

Mr. Booth explained that the Company had provided all of its invoices to the Division and had been transparent about its processes when combining damage/failure work with discretionary work. He testified that they had acted prudently. However, his review of the invoices showed that all of the work that began as damage/failure and included things that could reasonably be addressed at the same time, despite having not failed, were nonetheless being combined into the single non-discretionary category. So, what he envisioned in his recommendation was that the Division and the Company would collaborate to develop a more clear separation of the projects, narrowing the non-discretionary category to just those assets that have actually failed or are in imminent danger of failing. The non-discretionary work would then be more readily distinguishable from discretionary work included only because it made sense to use the crews and preparations work in place for the damage/failure work. While that secondary work may still be a prudent activity and encouraged because of labor and construction efficiencies, it would be categorized separately. This, according to Mr. Booth, would increase the discretionary spending and present a better opportunity for the Division to provide for performance incentives in the future.²⁸

Mr. Constable explained that the Electric ISR Plan included funding for an emergency management system (EMS) remote terminal unit (RTU) program.²⁹ This is a Company program intended to expand the existing EMS. It would install/replace infrastructure, such as communication cables or RTUs required to improve reliability performance; increase

²⁷ *Id.* at 52-53. Ms. Little explained that the three-pronged test involves comparing the cumulative approved spending versus cumulative actual spending versus cumulative plant in service. *Id.*

²⁸ *Id.* at 200-02.

²⁹ *Id.* at 127-28.

operational effectiveness; and provide data for asset expansion or operational studies. According to the Company, existing and future EMS infrastructure may be utilized for future Grid Modernization initiatives.³⁰ Mr. Constable explained that National Grid has an EMS that “includes some functionality, some controls, some computers at [the Company’s] control centers.” The RTU program would establish connections back to the control center from substations for data acquisition and control of the substations’ equipment.³¹ According to Mr. Constable, the RTUs become part of the EMS, gathering, translating, and connecting to the communication system that sends the data back to the control room.³²

In Docket No. 4770, National Grid’s base distribution rate case, approved six months prior to the hearing in this docket, the PUC approved an RTU separation program. That funding applied to substations that already had the EMS capability. The RTU separation program provided an upgrade to the functionality in those substations through a software upgrade.³³ The funding in this docket is to address substations that had not yet been “touched” with the EMS program. In those substations, the work on the RTUs is much more substantial, including replacement of RTUs; installation of new RTUs, to separate distribution from transmission; and associated new wiring.³⁴ Mr. Constable explained that this type work has been included in ISR plans in the past. The funding for RTU separation in the Docket No. 4770 rate case was a smaller, separate item. He offered that if the Company had requested the same type of RTU separation funding in the rate case, it would have been double dipping.³⁵

³⁰ Electric ISR Plan at Bates page 310 (Grid Response to DIV 1-10).

³¹ Hr’g. Tr. at 126-27.

³² *Id.* at 127.

³³ *Id.* at 128.

³⁴ *Id.* at 127-129.

³⁵ *Id.* at 128.

IV. Commission Findings

At an Open Meeting on March 19, 2019, the PUC considered the evidence and approved the FY 2020 Electric ISR Plan, filed on December 21, 2018, and the revised revenue requirement, filed on March 1, 2019. The PUC also adopted all of Mr. Booth's recommendations, including the requirement that National Grid complete all remaining area studies prior to filing the FY 2023 Electric ISR Plan. While Mr. Booth explained the delays in completion of the area studies can be attributed to the complexity of the work and regulatory changes, he has continually expressed concern with the lack of completed areas studies and their impact on the ISR planning.

Accordingly, it is hereby

(23909) ORDERED:

1. The Narragansett Electric Company d/b/a National Grid's revised Electric Infrastructure, Safety, and Reliability Plan FY 2020 Proposal, filed on December 21, 2018, and revised on March 1, 2019, is approved.
2. The Narragansett Electric Company d/b/a National Grid shall provide, as part of its FY 2021 filing, more detail to support the purported need for investments, particularly for multi-year projects or those classified as "major programs" within a category.
3. The Narragansett Electric Company d/b/a National Grid shall provide, as part of its FY 2021 filing, details on individual projects where the costs differ from budget by more than 10%, whether that difference resulted from over- or under-spending or timing.

4. The Narragansett Electric Company d/b/a National Grid shall follow the Division of Public Utilities and Carriers' recommendations that were filed on February 20, 2019, specifically:
 - a. National Grid and the Division shall consider a method to combine and manage a discretionary budget for repairs completed in the Damage/Failure and I&M categories separately from a budget required to replace failed equipment in a non-discretionary category. The Company's proposed FY 2021 ISR Plan should include budget categories, rationale, and proposed spend that reflect a consensus methodology.
 - b. National Grid shall develop an alignment between various planning and project evaluation processes, with consideration as to how a grid modernization strategy may be incorporated. This includes, but is not limited to, the System Reliability Procurement, Area Studies, ISR Plan, Non-Wires Alternative options, and internal Design Criteria.
 - c. National Grid shall propose a methodology to revise current and future study documents supporting Asset Replacement and System Capacity programs or projects, as applicable, including, at minimum:
 - i. The traditional elements included in the Company's current studies, including, but not limited to, purpose and problem statement; scope and program description; condition assessment/criticality rankings; alternatives considered; solution; cost; and timeline.
 - ii. Discussion on the impact to related Company initiatives, PUC programs, the various pilot projects, or other requirements driven by System Reliability Procurement, Distribution System Planning,

Heat Maps, and emerging initiatives. This shall include a detailed comparison of recommendations to Area Studies to determine if solutions are aligned with study outcomes, noting where adjustments are required to avoid redundancy in planning. The discussion also should include an evaluation of potential incremental investments that support the Company's long-term grid modernization strategy, including a description of the technology or infrastructure investment, cost benefit to traditional safety and reliability objectives, and additional operational benefits achieved if implemented.

- iii. A robust Non-Wires Alternatives evaluation for projects passing initial screening. The evaluation should clearly identify alternatives considered, costs, and benefits.
- d. National Grid shall manage major Asset Replacement and System Capacity and Performance project budgets separate from other discretionary projects, such that any budget variances (underspend) will not be utilized in other areas of the Infrastructure, Safety, and Reliability Plan. The Company shall provide quarterly budget and project management reports.
- e. National Grid will continue to manage (underspend/overspend management) individual project costs within the Infrastructure, Safety, and Reliability Plan discretionary category (comprised of Asset Condition and System Capacity and Performance projects), such that total portfolio costs are aligned within a discretionary budget target that excludes major substation projects.

- f. National Grid shall continue to provide quarterly reporting on Damage/Failure expenditures to include the details of completed projects by operating region. The Company will separately identify Level I projects repaired as a result of the Infrastructure and Maintenance program.
- g. National Grid shall continue to provide a detailed budget for System Capacity & Performance and Asset Condition in order to provide transparency on a project level basis for the current and future four-year period. The budget shall be provided in advance of the FY 2021 Infrastructure, Safety, and Reliability Plan Proposal filing, but in any event no later than August 31, 2019.
- h. National Grid shall submit an evaluation of future proposed Asset Condition projects as compared to the Company's Long-Range Plan in advance of the FY 2021 Infrastructure, Safety, and Reliability Plan Proposal filing, but in any event no later than August 31, 2019.
- i. National Grid shall continue to submit its detailed substation capacity expansion plans and load projections, and include an evaluation of proposed projects against the Company's Long-Range Plan, in advance of the FY 2021 Infrastructure, Safety, and Reliability Plan Proposal filing, but in any event no later than August 31, 2019.
- j. National Grid shall continue to submit a cost-benefit analysis on the Vegetation Management Cycle Clearing Program and a separate cost-benefit analysis on the Enhanced Hazard Tree Management program for the Division's review prior to submitting the Company's FY 2020 ISR Plan Proposal, but in any event no later than August 31, 2019.

- k. National Grid shall continue to submit its Metal-Clad Switchgear replacement program cost-benefit analysis to the Division prior to submitting the Company's FY 2021 ISR Plan Proposal to the extent any Metal-Clad Switchgear replacements or major upgrades are proposed, but in any event no later than August 31, 2019.
5. The Narragansett Electric Company d/b/a National Grid shall complete all remaining area studies prior to filing the FY 2023 Electric ISR Plan.
6. In its quarterly periodic reports, The Narragansett Electric Company d/b/a National Grid shall include an explanation of all new technologies the Company is exploring to assist in distribution system planning, particularly as they relate to the integration of distributed energy resources or to providing additional visibility on the distribution grid.
7. Contemporaneous with its filing of the FY 2021 Electric Infrastructure, Safety, and Reliability Plan, The Narragansett Electric Company d/b/a National Grid shall file a cost-benefit analysis consistent with the Guidance Document issued in Docket No. 4600-A.
8. After the filing of The Narragansett Electric Company d/b/a National Grid's FY 2021 Electric Infrastructure, Safety, and Reliability Plan, the Company shall update the revenue requirement following the filing of the Company's income taxes for 2019.
9. The Narragansett Electric Company d/b/a National Grid's Motion for Protective Treatment of the sanction papers submitted in response to Division Data Request 4-4 is hereby approved.

10. The Narragansett Electric Company d/b/a National Grid shall comply with all other instructions contained in this Order.

EFFECTIVE AT WARWICK, RHODE ISLAND, ON APRIL 1, 2019,
PURSUANT TO AN OPEN MEETING DECISIONS ON MARCH 19, 2019. WRITTEN
ORDER ISSUED SEPTEMBER 29, 2020.

PUBLIC UTILITIES COMMISSION



Margaret E. Curran, Chairperson



Marion S. Gold, Commissioner



Abigail Anthony, Commissioner

Notice of Right of Appeal: Pursuant to R.I. Gen. Laws § 39-5-1, any person aggrieved by a decision or order of the PUC may, within 7 days from the date of the Order, petition the Supreme Court for a Writ of Certiorari to review the legality and reasonableness of the decision or Order.